

**REMARKS**

Claims 11 and 12 have been canceled. Thus, Claims 1-9, 13-19, 27 and 28 remain pending in the application. Claims 1, 7, 14, 17, 27 and 28 have been amended, as shown above. These amendments are respectfully submitted to not introduce new matter and their entry is respectfully requested.

**I. 35 U.S.C. § 102 - ANTICIPATION**

Claims 1-3, 7-9, 12, 14, 15 and 17-29 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Tabei (U.S. Pat. No. 4,404,586). In light of the above amendments, Applicants respectfully traverse this rejection.

A cited prior art reference anticipates the claimed invention under 35 U.S.C. § 102 only if every element of a claimed invention is identically shown in that single reference, arranged as they are in the claims. MPEP § 2131; *In re Bond*, 910 F.2d 831, 832, 15 U.S.P.Q.2d 1566, 1567 (Fed. Cir. 1990). Anticipation is only shown where each and every limitation of the claimed invention is found in a single cited prior art reference. MPEP § 2131; *In re Donohue*, 766 F.2d 531, 534, 226 U.S.P.Q. 619, 621 (Fed. Cir. 1985).

Applicants respectfully submit that Tabei does not teach (expressly or inherently) at least the following feature recited in amended independent Claims 1 and 14: “*a second two-color photo-detector having a third photo-detector element capable of absorbing light within a third range of wavelengths and a fourth photo-detector element capable of absorbing light within a fourth range of wavelengths, said first, second, third and fourth range of wavelengths each being different from the other.*”

Tabei recites a color imager including a color filter 4 above a first photosensitive element 26 of a photosensitive layer 3 capable of absorbing light within a first wavelength range (e.g., blue) elevated above a photodiode 5 capable of absorbing light within a second wavelength range (e.g., red). (*Figure 2; Col. 5, Line 38 – Col. 6, Line 26*). A second photosensitive element 27 of the photosensitive layer 3 is also capable of absorbing light within the first wavelength range (e.g., blue). The second photosensitive element is elevated above a second photodiode 34 capable of absorbing light within a third wavelength range (e.g., red and green). (*Figure 2; Col. 5, Line 38 – Col. 6, Line 26*).

There is no teaching or suggestion in Tabei that the second photosensitive element 27 of the photosensitive layer 3 that is elevated above the photodiode 34 is capable of absorbing light within a third wavelength range, different from the first and second wavelength ranges. Instead, the second photosensitive element 27 elevated above the photodiode 34 merely absorbs the same first wavelength range (e.g., blue) that the first photosensitive element 26 elevated above the photodiode 5 absorbs. In addition, there is no teaching or suggestion in Tabei that the second photodiode 34 is capable of absorbing light within a fourth wavelength range.

For at least these reasons, Tabei fails to anticipate Applicants' invention as recited in Claims 1 and 14 (and their dependents). Accordingly, Applicants respectfully request that the Examiner withdraw the § 102 rejection of Claims 1-3, 7-9, 14, 15 and 17-19. Claim 12 has been canceled, thus rendering the rejection of this claim moot.

## **II. 35 U.S.C. § 103 - OBVIOUSNESS**

Claims 13 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Tabei. Claims 4-6, 16, 27 and 28 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over

Tabei in view of Nozaki et al. (U.S. Patent No. 4,677,289). Claim 11 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Tabei in view of Hayward et al. (U.S. Patent No. 4,214,264). In light of the above amendments, Applicants respectfully traverse these rejections.

A *prima facie* case of obviousness is established when the teachings of the prior art itself suggest the claimed subject matter to a person of ordinary skill in the art. *In re Bell*, 991 F.2d 781, 783, 26 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1993). To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed invention and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. MPEP § 2142.

When a proposed modification or combination of the prior art would render the prior art invention unsatisfactory for its intended purpose or change the principle of operation of the prior art invention, there is no suggestion or motivation to make the proposed modification. As a result, the teachings of the references are not sufficient to render the claims *prima facie* obvious. MPEP § 2143.01.

Applicants respectfully submit that Tabei, alone or in combination with one or both of Nozaki et al. and Hayward et al., does not disclose or suggest “*a second two-color photodetector having a third photo-detector element capable of absorbing light within a third range of wavelengths and a fourth photo-detector element capable of absorbing light within a fourth range of wavelengths, said first, second, third and fourth range of wavelengths each*

*being different from the other,”* as claimed in independent Claim 1, from which Claims 4-6, 13 and 27 depend, and independent Claim 14, from which Claims 16 and 28 depend.

As described above, Tabei does not disclose, teach or suggest that the second photosensitive element 27 of the photosensitive layer 3 that is elevated above the photodiode 34 is capable of absorbing light within a third wavelength range, different from the first and second wavelength ranges. Instead, the second photosensitive element 27 elevated above the photodiode 34 merely absorbs the same first wavelength (e.g., blue) that the first photosensitive element 26 elevated above the photodiode 5 absorbs. In addition, there is no teaching or suggestion in Tabei that the second photodiode 34 is capable of absorbing light within a fourth wavelength range.

Nozaki et al. recites a color sensor including multiple, stacked photodiodes. Each of the photodiodes senses a different wavelength range, and all photodiodes are electrically connected in series. (*Abstract*). One of the objects of Nozaki et al. is as follows: “since respective photodiodes are stacked one over another, it is possible to identify the color components of light incident on a small area, i.e., one kind of photosensing area when viewed in a planar plane.” (*Col. 1, lines 64-68*).

Thus, modifying Nozaki et al. to include a second two-color photo-detector that includes third and fourth photo-detector elements capable of absorbing light within third and fourth wavelength ranges, different from the first and second wavelength ranges absorbed by the first two-color photo-detector, as claimed in Claims 1 and 14, would render Nozaki et al. unsatisfactory for its intended purpose.

Hayward et al. recites a color image sensing array including a first cell 113 having a color filter 120 (e.g., yellow) over a first channel S1 capable of absorbing light within a first wavelength range (e.g., green). The first channel S1 is elevated above a second channel S2

capable of absorbing light within a second wavelength range (e.g., green and red). The first cell 113 is adjacent a second cell 113 having a color filter 122 (e.g., cyan) over a first channel S1 capable of absorbing light within a third wavelength range (blue and green). The first channel S1 of the second cell 113 is elevated above a second channel S2 capable of absorbing light within the first wavelength range (e.g., green). (*Figure 1, Col. 3, Line 29 – Col. 4, Line 35*). The configuration of Hayward et al. enables “each unit cell ... [to produce] a photosignal representing the green component of incident light, the color component in which the human visual system is most able to distinguish fine detail.” (*Col. 4, Lines 35-43*).

Thus, modifying Hayward et al. to enable the second cell 113 to be capable of absorbing light within third and fourth wavelength ranges, each being different from each other and from both the first and second wavelength ranges absorbed by the first cell 113, as claimed in Claims 1 and 14, would render Hayward et al. unsatisfactory for its intended purpose.

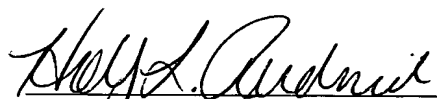
For at least these reasons, Applicants respectfully submit that the Office Action does not establish a *prima facie* case of obviousness against Claims 4-6, 13, 16, 27 and 28. Accordingly, Applicants respectfully request that the Examiner withdraw the § 103 rejection of Claims 4-6, 13, 16, 27 and 28. Claim 11 has been canceled, thus rendering the rejection of this claim moot.

**CONCLUSION**

Thus, all grounds of rejection and/or objection are traversed or accommodated, and favorable reconsideration and allowance are respectfully requested. Should the Examiner have any further questions or comments facilitating allowance, the Examiner is invited to contact Applicant's representative indicated below to further prosecution of this application to allowance and issuance.

Respectfully submitted,

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